CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. R2-2003-0074
UPDATED WASTE DISCHARGE REQUIREMENTS
AND RESCISSION OF ORDER NO. 94-181 FOR:

WESTPORT LANDFILL
JOHN ARRILLAGA SURVIVOR'S TRUST, THE PEERY PRIVATE INVESTMENT COMPANY, PEERY PUBLIC INVESTMENT COMPANY
REDWOOD CITY, SAN MATEO COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board), finds that:

SITE OWNER AND LOCATION

1. The legal owners of the site are the John Arrillaga Survivor's Trust, The Peery Private Investment Company, and the Peery Public Investment Company and are hereinafter referred to as the Dischargers. The unlined landfill site, as shown in Figure 1, is located adjacent to Belmont Slough in Redwood City. A commercial business park including twenty (20) two-story buildings and associated site improvements has been constructed at the site (Figure 2).

PURPOSE OF ORDER UPDATE

2. The primary purposes of this Order are 1) to update the existing Waste Discharge Requirements (WDRs) to reflect recent site development and current facility conditions and 2) to assure compliance with the appropriate portions of Title 27 of the California Code Of Regulations (formerly known as Chapter 15, Title 23), referred to hereinafter as Title 27. The "appropriate portions" of Title 27 are hereby defined as the relevant sections pertaining to post-closure maintenance and water quality monitoring.

SITE DESCRIPTION

3. The site was tidal marshlands until approximately 1910, at which time the area was diked and portions used for pastureland and for a hog farm. The landfill area was used as a refuse disposal site from about 1948 to its closing in about 1970. Disposal in the southeastern portion of the site (referred to as the Panhandle area) reportedly ceased in about 1963, while disposal in the northeastern portion of the site (the Mound area) continued until about 1970.

4. The Westport Landfill is a closed 45-acre unlined site located approximately one-mile east of Highway 101, and is bordered by Belmont Slough to the north and west, and by existing residential developments and Marine World Parkway to the

east and south. The landfill covers the majority of two contiguous parcels that have been developed as a commercial business park called Westport Office Park.

5. The site currently includes a commercial business park with twenty (20) two-story office and research buildings totaling approximately 968,000 leasable square feet. The site (Figure 2) is currently covered by approximately 522,000 square feet of building footprints (14.2% of entire area), 1,522,100 square feet of asphalt and concrete pavement (41.4% of entire area), and 1,631,400 square feet of landscaped area (44.4% of entire area).

REGULATORY HISTORY

6. On July 20, 1976 Waste Discharge Requirements were adopted for the site in Board Order No. 76-77. In that Order Parkwood 101, Limited (the previous landfill owner), was required to place "a final cover of at least four-feet of compacted inert fill material" over the waste disposal areas. Board Order No. 76-77 was subsequently revised on October 18, 1977 by Order No. 77-134, wherein a revised time schedule was adopted for compliance with site closure specifications. Closure activities at the site included placement of additional cover material over the waste disposal areas and grading to eliminate ponding.

7. On December 14, 1994, the Board adopted Order No. 94-181, rescinding Order Nos. 76-77 and 77-134. Among other activities in response to the requirements of Order No. 94-181, and in conjunction with the reconstructed cap and site development, the lateral extent of refuse was determined using historical aerial photos taken throughout the operational period of the landfill and through organized trenching. Based on the results of these studies a perimeter cut-off wall was installed consisting of a vertical clay barrier with a minimum width of two-feet connecting the overlying low permeability cover layer with the underlying young Bay Mud, completing the containment envelope. The vertical extent of the refuse as depicted in various geotechnical studies was confirmed by a deep boring program and by pile driving observations.

LANDFILL HISTORY

8. Approximately 45 acres of the project site were used for landfill disposal of municipal solid waste and incinerator ash from about 1948 to about 1970. Approximately 650,000 cubic yards of fill material was disposed of at the site on the existing unlined Bay Mud. The waste material reportedly disposed at the site consists of non-hazardous material including: municipal solid waste, construction debris paper, glass, plastic, wood, rock fragments, and incinerator ashes.

9. The landfill can be divided into three areas. Refuse is present primarily in the southern and eastern portions of the site and forms two elevated areas, referred to as (1) the Mound (35 acres) in the eastern portion of the site, and (2) the Panhandle (an elongated area of 10 acres) along the southeastern property

boundary. The third area (40 acres), located between the refuse fill and the levees, is a low-lying area where unplanned sporadic refuse disposal occurred. Limited refuse disposal activities occurred outside the current property boundary as indicated by small pockets of discontinuous refuse identified during the installation of underground utilities and a perimeter leachate collection system. The site's surface soils are currently composed largely of fill that has been used to: establish a cap over the refuse fill area; to fill low-lying elevations; to construct building pads; to serve as a base for site paving; and, to provide topsoil for landscaped areas.

LANDFILL INVESTIGATIONS AND WORK

10. During the 1970's several possible real estate developments were proposed and various site investigations were performed. Until Westport Office Park, no proposed project continued beyond the preliminary stage. In conjunction with the planning and design of Westport Office Park, additional site investigations were performed and substantial information was developed and recorded.

11. Preliminary Soil and Groundwater Investigation- 1988: In 1988, a preliminary soil and groundwater investigation was conducted by Kaldveer Associates. Kaldveer installed five monitoring wells in the western portion of the site to evaluate shallow groundwater quality adjacent to the refuse fill area.

12. SWAT- 1988 to 1989: In 1988 and 1989, Levine-Fricke conducted a Solid Waste Assessment Test (SWAT) to determine the landfill's potential to have adverse effects on water quality. Levine-Fricke installed seven shallow groundwater monitoring wells outside the primary refuse areas, seven monitoring wells within the primary refuse areas, and three deeper wells.

13. Addendum to SWAT- 1992 and 1993: Levine-Fricke conducted groundwater monitoring activities to complete the SWAT.

14. Removal and Replacement of Lead-Affected Soils and Landfill Materials- 1994: Levine-Fricke investigated and remediated lead-affected soil in three locations at the site. In order to complete the removal activities, two monitoring wells were abandoned. (P-1A and P-5)

15. On March 2, 1994, United Soil Engineering, Inc., (USE) conducted an investigation to determine the thickness of the landfill cover. A total of 77 borings were advanced to a depth of 6 feet. USE's investigation revealed that some portions of the landfill cover did not meet the four-foot cover requirement as specified in Order No. 76-77 and as revised by Order No. 77-134. USE's investigations revealed that an additional one to two feet of clay or low permeability soil was required to achieve the minimum required thickness for most of the landfill cover.

16. Provision C.10 of WDR Order No. 94-181 required the Dischargers to reconstruct those portions of the landfill cap that did not meet the requirements of Section 2581 of Article 8, Chapter 15 (e.g., a cap containing a minimum of two feet of foundation material, one foot low permeability layer with a hydraulic conductivity of less than or equal to 10^{-6} cm/sec, and a one foot layer for erosion protection). The Dischargers submitted a Cap Reconstruction Plan dated February 14, 1995. The Cap Reconstruction is now complete in conformance with the Cap Reconstruction Plan.

17. Deep Boring Program – 1995: Geomatrix performed a subsurface study to determine the physical characteristics of the soil by advancing 13 deep borings to approximately 140 feet BGS.

18. Additional Well Installation – 1996-1998: Geomatrix installed four new monitoring wells to provide additional monitoring points for the landfill, as required by Board Order No. 94-181. (MW3-1R, MW3-2, MW-4, and P5-1)

19. Ammonia Investigation – 1998: Geomatrix conducted an assessment of ammonia in soil and groundwater in the vicinity of the former pig farm and found that these conditions may not be related to the landfill. Soil and grab groundwater samples were collected from 11 borings.

20. Acetone Investigation – 1999: Following the detection of acetone in a groundwater sample collected during a semi-annual monitoring event, an investigation was conducted by Geomatrix to assess the lateral extent of the acetone. Grab groundwater samples were collected from borings placed in the vicinity of the well where acetone had been detected.

21. Concurrent with site and building approval and construction (most of which took place in the late 1990s), landfill gas (LFG) venting and monitoring systems were approved and installed and meet regulatory requirements.

SITE GEOLOGIC SETTING

22. The site is domed in the northeast, central, and southeast portions of the site where refuse was placed and is relatively flat in the northwest and west portions. Elevations at the site currently range from 104.5 to 133.5 feet where City of Redwood City datum 100.0 equals mean sea level. The fill at the site overlies estuarine deposits referred to as Bay Mud. The Bay Mud deposits surround San Francisco Bay and generally consist of very low permeability plastic silty clays with high organic content. Stiff to very stiff sandy clay/clayey sand has been encountered below the Bay Mud extending to a depth of approximately 200 feet below ground surface (bgs). It has been reported that a moderately permeable sequence of clay, sand, and gravel underlies the stiff clays, beginning at a depth of 200 feet bgs. Franciscan bedrock was reported to exist at a depth of

approximately 300 feet bgs along the western side of the site and 500 feet bgs along the eastern side of the site

SITE HYDROGEOLOGIC SETTING

23. Hydrogeologic investigations have shown that, within the former landfill, the groundwater movement is radially away from the Mound area (eastern portion of site). As part of corrective action at the site groundwater collection trenches were installed along the northern and southeastern margins of the Mound and the Panhandle to assist with containment and removal of leachate-impacted groundwater adjacent to the primary refuse disposal areas.

24. The direction of deeper groundwater flow cannot be established with a high level of certainty because of the relatively discontinuous nature of the water bearing zones in the low permeability clay layer beneath the younger Bay Mud. However, it has been reported that regional hydrogeologic conditions suggest that deeper groundwater flows in an easterly direction towards San Francisco Bay.

25. Comparisons of shallow and deep groundwater levels have indicated the existence of both upward and downward vertical hydraulic gradients across the site.

26. Confined regional aquifer zones of moderate permeability are present at a depth of approximately 190 to 200 feet bgs. These aquifer zones are an extension of the major artesian basin of the south Bay and Santa Clara Valley and consists chiefly of unconsolidated Quaternary Alluvium.

GROUND WATER CONTAMINATION AND WATER QUALITY

27. Groundwater within the landfill refuse has been shown to contain volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and ammonia.

28. Shallow and deep groundwater around the perimeter and/or beneath the landfill, outside the refuse limit, has had sporadic detections of low levels of VOCs and SVOCs at the following maximum concentrations: benzene at 7.2 micrograms per liter (µg/L), ethyl-benzene at 5 µg/L, acetone at 120 µg/L, toluene at 6 µg/L, trichloroethylene at 33 µg/L, carbon tetra-chloride at 5 µg/L, 1,1,1-trichloroethane at 7 µg/L, chloroform at 1 µg/L, 4-methyl-2-pentanone at 43 µg/L, phenol at 54 µg/L, bis (2-ethylhexyl) phthalate at 81 µg/L. Elevated concentrations of ammonia are present along the western edge of the landfill where a pig farm operated during the 1940's and 1950's and is the suspected ammonia source.

LEACHATE COLLECTION AND REMOVAL SYSTEM (LCRS)

29. The leachate collection system at the site was expanded and upgraded in 1998, concurrent with site development and consists of three groundwater collection

trenches. The trenches were excavated to depths of 8 to 13 feet bgs and intercept the full thickness of the refuse-containing fill layer. The collection trenches are filled with permeable material to allow leachate to flow into perforated collection pipes. The trenches are capped with low-permeability clay. The locations of the leachate control trenches are shown in Figure 2. The northern leachate collection and removal trench is 1,400 feet long and is fitted with a sensor-activated automatic pumping system that periodically pumps leachate from manhole No. 3 to a connection with the sanitary sewer lateral where the leachate then flows by gravity to the South Bayside System Authority (SBSA) publicly operated treatment works (POTW) plant.. The two southeastern leachate collection and removal trenches total 2,800 feet in length. To remove leachate-impacted groundwater from these trenches, sensor activated automatic pumping systems have been installed in manhole No.'s 1 and 2; leachate-impacted groundwater is automatically pumped from manhole No. 2 and from manhole No. 1 to the sanitary sewer lateral where the leachate then flows by gravity to the SBSA POTW plant.

30. Leachate is discharged under a permit issued by the SBSA. The SBSA does random sampling and testing of the leachate discharge. All repeat test results forwarded by the SBSA have shown that the leachate discharge meets the SBSA criteria for discharge to the SBSA system without treatment.

LANDFILL GAS MANAGEMENT

31. Concurrently with site and building approval and construction, landfill gas (LFG) venting and monitoring systems for each building were approved and installed. A trench network was excavated under each building. A perforated high-density polyethylene (HDPE) pipe was embedded in rounded rock backfill in these trenches. The perforated pipes were extended beyond the building perimeter where they were manifolded together. The LFG pipe manifolds are connected to vertical LFG vent risers that allow the LFG to be vented to, and dissipated in, the atmosphere. The LFG vent risers and their immediate vicinity are monitored at a minimum of monthly to insure that dangerous concentrations of gas do not exist.

32. A continuous 60 mil HDPE membrane was installed on the underside of each first floor building slab to prevent LFG penetration into each building. Each building has a system of ten LFG sensors that are continuously monitored by an offsite life safety monitoring company. The LFG sensors are calibrated quarterly. The LFG detection alarm system and the LFG sensor calibration records are inspected annually by the San Mateo County Health Services Agency.

33. The LCRS trenches described above also act as a LFG cut-off wall. There are 13 LFG vent risers connected to the vadose zone in the permeable material above the leachate. They serve to collect the LFG intercepted by the leachate trenches and to vent this gas to the atmosphere before the LFG migrates to the property line.

These LFG vent risers are monitored and inspected not less frequently then once per month.

CURRENT AND FUTURE LAND USES

34. In accordance with plans submitted to, and approved by, the City of Redwood City and the San Mateo County Health Services Agency, the former landfill site has been developed, occupied, and maintained as a commercial business park.

35. The parcels are zoned for commercial use by the City of Redwood City. Permits for additional development and/or modifications to the existing developments may be applied for in the future.

POST CLOSURE MONITORING AND MAINTENANCE

36. The Dischargers submitted Utility Inspection, Maintenance, and Settlement Monitoring programs for different portions of the site to the City of Redwood City as part of the site's post-closure activities. This program includes providing surveyed permanent benchmarks on the property, surveyed utility alignments, and detailed periodic observations and records of settlement of the water facilities and the sanitary sewer force main.

MONITORING PROGRAMS

37. Title 27 requires that the Dischargers maintain a groundwater-monitoring program designed to detect the presence of waste constituents in groundwater outside of the waste management unit (WMU). The required monitoring is included in the Discharge Monitoring Program (Attachment A) and consists of a list of constituents of concern (COCs), sampling frequency, approved analytical methods, reporting requirements, the point of compliance, and an approved evaluation method to determine compliance consistent with Title 27.

38. **Groundwater Monitoring** - Board Order No. 94-181 required the Dischargers to document the installation of four additional monitoring wells to be included in the Discharge Monitoring Program (Attachment A). A report documenting completion of these wells, or their equivalent monitoring points, was submitted to the Board in a letter dated June 28, 1996. (MW3-1R, MW3-2, MW-4, and P5-1)

39. **Groundwater Monitoring** - There are 12 shallow (4 feet to 32 feet bgs) groundwater monitoring wells and piezometers at the site. These are shown on **Figure 2** and include P3-R, P-7, P-8, MW-4, MW-4P, K-4, P5-1R, MW-3, MW3-2R, UPG-1, UPG-2, and K-1. There are three deeper (35 feet to 72 feet bgs) groundwater-monitoring wells and piezometers at the site. These are shown on **Figure 2** and include DW-1, DW-2 and DW-3. Groundwater-monitoring is detailed in the Discharge Monitoring Program attached to this Order (Attachment

A). The Dischargers are required to analyze according to the monitoring parameters presented in Attachment A of this Order.

40. **Leachate Monitoring** – There are 17 leachate monitoring wells/piezometers at the site. These are shown on Figure 2 and include S-2, S-3A, S-4A, S-5, P-2A, P3-PZ, P-4, P5-1-PZ, P-6, K3-R, K3-PZ, MW3-1R, PZ-2, PZ-2P, PZ-3A, PZ-3B, and PZ-3C. The Leachate Monitoring Program is detailed in the Discharge Monitoring Program attached to this Order (Attachment A).

41. **Vadose Zone Monitoring** – Vadose zone monitoring is conducted as part of the landfill gas venting and monitoring program and has been integrated into the commercial development of the site.

BASIN PLAN

42. The Regional Board adopted a revised Water Quality Plan for the San Francisco Bay Basin (Basin Plan) in June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The State Water Resource Control Board and the Office of the Administrative Law approved the revised Basin Plan on July 20 and November 13, respectively, of 1995. A summary of regulatory provisions is contained in Title 23 of the California Code of Regulations, Section 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater.

43. State Board Resolution No. 89-39, "Sources of Drinking Water," defines potential sources of drinking water to include all groundwater in the region, with limited exceptions for areas containing high TDS, high background contaminant levels, or those areas with a low-yield. Shallow and deeper (33-75 feet bgs) groundwater at the site is not considered a potential drinking water source as it exceeds electrical conductivities of 5,000 microseimens per centimeter (uS/cm). There is no current use of the site's shallow or deep groundwater, nor any anticipated plans for its use. However, any groundwater at the site meeting Resolution 89-39 requirements of TDS concentrations below 3000 mg/L, electrical conductivities below 5,000 uS/cm, and with production yields greater that 200 gallons per day will be considered a potential drinking water source.

BENEFICIAL USES

44. The beneficial uses of Belmont Slough, and South San Francisco Bay as contained in the Basin Plan are as follows:
    a. Wildlife habitat;
    b. Brackish and salt water marshes;
    c. Water contact recreation;
    d. Non-water contact recreation;
    e. Commercial and sport fishing;

f. Preservation of rare and endangered species;
g. Estuarine habitat;
h. Fish migration and spawning;
i. Industrial process supply; and,
j. Industrial service supply.

45. The present and potential beneficial uses of the groundwater are as follows:
a. Domestic and municipal water supply;
b. Freshwater replenishment; and,
c. Agricultural supply.

STORM WATER POLLUTION PREVENTION

46. Board Order No. 94-181 required the Dischargers to prepare, implement and submit a Storm Water Pollution Prevention Plan (SWPPP) in accordance with requirements specified in State Water Resources Control Board General Permit for Storm Water Discharges Associated with Industrial Activities (NPDES Permit No. CAS000001). The Dischargers prepared and submitted a SWPPP dated March 24, 1995, in accordance with requirements specified in State Water Resources Control Board General Permit for Storm Water Discharges Associated with Construction Activities (NPDES Permit No. CAS000002). The SWPPP was implemented at the site during the construction phase. The NPDES General Permit requires the Dischargers to submit annual reports. The Dischargers implemented the SWPPP and submitted annual reports. With the completion of the construction phase, the Dischargers have filed a Notice of Termination for the site.

CONTINGENCY PLAN

47. Board Order No. 94-181 required the Dischargers to submit a Contingency Plan that would be implemented in the event of a leak or spill from the leachate collection facilities. An acceptable Contingency Plan was submitted to the Board on March 15, 1995. The Contingency Plan provides for immediate notice to the Board, the Local Enforcement Agency, and the California Department of Toxic Substances Control. The Contingency Plan also provides for the implementation of a corrective action plan to stop and contain the migration of pollutants from the site.

POST-EARTHQUAKE INSPECTION AND CORRECTIVE ACTION PLAN

48. Board Order No. 94-181 required the Dischargers to submit a detailed Post-Earthquake Inspection and Corrective Action Plan to be implemented in the event of an earthquake generating ground shaking of Richter Magnitude 7 or greater at, or within 30 miles of, the landfill. The Dischargers submitted an acceptable Plan dated March 14, 1995. The Plan describes containment features and groundwater monitoring and leachate control facilities potentially impacted by the static and

seismic deformations of the landfill. The Plan provides for reporting results of the post earthquake inspection to the Board within 72 hours of the occurrence of an appropriate earthquake. Immediately after an earthquake event causing damage to the landfill structures, the Plan includes the implementation of the corrective action plan and includes providing notification of any damage to the Board.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

49. The Dischargers have completed a Final Environmental Impact Report, a Supplemental Environmental Impact Report, a Health Risk Assessment, and a Technical Addendum for development at the site that resulted in the filing of Notice of Determination 108639 Appendix H by the Redwood City Planning Division on March 3, 1995 stating that the findings were pursuant to California Environmental Quality Act (CEQA).

50. This action is exempted from the provision of CEQA pursuant to Section 15301, Title 14, of the California Code of Regulations.

PUBLIC NOTICE

51 The Board has notified the Dischargers and interested agencies and persons of its intent to issue waste discharge requirements for the Dischargers and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

PUBLIC MEETING

52 The Board in a public meeting heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Dischargers, their agents, successors and assigns are to conduct post-closure maintenance and monitoring and shall meet the applicable provisions contained in Title 27, Division 2, Subdivision 1 of the California Code of Regulations and Division 7 of the California Water Code and shall comply with the following:

A. PROHIBITIONS

1. Waste shall not be in contact with ponded water from any source whatsoever.

2. The site is regulated as a closed facility. Therefore, no further waste shall be deposited or stored at this site.

3. Leachate from waste and ponded water containing leachate or in contact with solid wastes shall not be discharged to the waters of the State or the United States.

4. Neither the treatment nor the discharge of waste shall create a condition of pollution, contamination or nuisance, as defined by Section 13050 of the California Water Code (CWC). (H & SC Section 5411, CWC Section 13263)

5. The Dischargers, or any future site owner or operator of the site, shall not cause the following conditions to exist in waters of the State at any place outside the waste management facility:

   a. Surface Waters

      1) Floating, suspended, or deposited macroscopic particulate matter or foam.

      2) Bottom deposits or aquatic growths;

      3) Alteration of temperature, turbidity, or apparent color beyond natural background levels;

      4) Visible, floating, suspended or deposited oil or other products of petroleum origin; and,

      5) Toxic or other deleterious substances to be present in concentrations or quantities which may cause deleterious effects on aquatic biota, wildlife or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentrations.

   b. Groundwater

      1) Groundwater shall not be degraded as a result of the waste maintained at this facility.

B. SPECIFICATIONS

1. All reports pursuant to this order shall be prepared under the supervision of a registered civil engineer, California registered geologist or certified engineering geologist.

2. The final cover system shall be maintained to promote lateral runoff and prevent ponding and infiltration of water.

3. Surface drainage from tributary areas and internal site drainage from surface sources shall not contact or percolate through wastes during the life of the site.

4. The site shall be protected from any washout or erosion of wastes or covering material and from inundation which could occur as a result of a 100-year, 24-hour

precipitation event, or as the result of flooding with a return frequency of 100 years.

5. The existing LCRS shall be inspected monthly or more frequently as necessary and any excess accumulated fluid shall be removed.

6. The existing containment, drainage, landfill gas, leachate collection, and monitoring systems at the facility, shall be operated and/or maintained as long as leachate or landfill gas is present and either or both pose a threat to water quality. In the event these existing features are found to be ineffective at resolving impairments to groundwater, the Dischargers may be required to take additional corrective actions.

7. The Dischargers shall assure that the foundation of the site, the solid waste fill, and the structures (including future site structures) which control leachate, surface drainage, erosion, and gas are maintained to relevant engineering criteria, including the ability to withstand conditions generated during the maximum probable earthquake. Furthermore, new structures shall be constructed and maintained in compliance with approved engineering criteria.

8. The Dischargers shall analyze the samples from the specified groundwater wells as outlined in the Discharge Monitoring Program (Attachment A).

9. The Dischargers shall install any reasonable additional groundwater and leachate monitoring devices required to fulfill the terms of any future Discharge Monitoring Program issued by the Executive Officer.

10. Landfill gases shall be adequately vented, removed from the landfill, or otherwise controlled to minimize the danger of explosion, adverse health effects, nuisance conditions, or the impairment of beneficial uses of water.

11. The Dischargers are subject to performance standards adopted by the California Integrated Waste Management Board for post-closure land use, which specify that the devices and features installed in accordance with this Order are designed, maintained, and continue to operate as intended without significant interruption.

12. The Dischargers shall maintain a minimum of two surveyed permanent monuments installed by a licensed land surveyor near the landfill from which the location and elevation of wastes, containment structures, and monitoring facilities can be determined throughout the operation and post-closure maintenance period.

13. The Regional Board shall be notified immediately of any failure occurring in the waste management unit. Any failure that threatens the integrity of containment features or the landfill shall be promptly corrected after approval of the method and schedule by the Executive Officer.

14. The Dischargers shall maintain the facility so as to prevent a statistically significant increase in the concentrations of indicator parameters or constituents of concern at groundwater monitoring points as provided in Section 20415 (e) (7) of Title 27. The Dischargers shall maintain the facility so as not to exceed the "Water Quality Protection Standard" (WQPS) of the Discharge Monitoring Program (Attachment A).

15. In the event of a release of a constituent of concern from the WMU beyond the Point of Compliance (Section 20405, Title 27), the site begins a Compliance Period (Section 20410, Title 27). During the Compliance Period, the Dischargers shall perform an Evaluation Monitoring Program and, depending on the findings, prepare an Optional Demonstration Report or Feasibility Study and Corrective Action Program, as appropriate. The Point of Compliance is defined as the vertical surface located along the hydraulically downgradient limit of the waste management unit and extending through the uppermost aquifer underlying the unit.

16. The Dischargers shall comply with all applicable provisions of Title 27 of the California Code of Regulations not specifically referred to in this Order.

C. PROVISIONS

1. The Dischargers shall comply with all Prohibitions, Specifications and Provisions of this Order. All required submittals must be acceptable to the Executive Officer. The Dischargers must also comply with all conditions of these Waste Discharge Requirements. Violations may result in enforcement actions, including Regional Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Regional Board. (CWC Section 13261, 13263, 13265, 13267, 13268, 13300, 13301, 13304, 13340, 13350).

2. All technical and monitoring reports submitted in accordance to this Order are being requested pursuant to Section 13267 of the California Water Code. Failure to submit reports in accordance with schedules established by this Order or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer may subject the Dischargers to enforcement action pursuant to Section 13268 of the California Water Code.

3. In addition to printed submittals, all reports submitted pursuant to this Order must be submitted as electronic files in PDF format. The Regional Board has implemented a document imaging system, which is ultimately intended to reduce the need for printed report storage space and streamline the public file review process. Documents in the imaging system may be viewed, and print copies made, by the public, during file reviews conducted at the Regional Board's office. PDF files can be created by converting the original electronic files format (e.g., Microsoft Word) and/or by scanning printed text, figures, and tables. Data tables

containing water level measurements, sample analytical results, coordinates, elevations and other monitoring information shall also be provided electronically in Microsoft Excel® or similar spreadsheet format to provide an easy to review summary, and to facilitate data computations and/or plotting that Regional Board staff may undertake during their review. Data tables submitted in electronic spreadsheet format will not be included in the case file for public review. All electronic files must be submitted on CD or diskette and included with the print report.

4. The Dischargers shall file with the Regional Board, Discharger Monitoring Reports, performed according to the attached Discharge Monitoring Program issued by the Executive Officer. The Executive Officer may amend the Discharge Monitoring Program at any time, as water quality conditions warrant.

5. The Dischargers shall submit an **Annual Monitoring Report**, acceptable to the Executive Officer, by January 31 of each year in accordance with the attached Discharge Monitoring Program (Attachment A). The annual report to the Board shall cover the previous calendar year as described in Part A of the Discharge Monitoring Program. In addition to the requirements outlined in Attachment A, this report shall also include the following: location and operational condition of all leachate and groundwater monitoring wells; groundwater and leachate potentiometric contours for each monitoring event; and tabulation of monthly leachate volumes discharged to the sanitary district along with any tabulated analytical results (if collected by the Dischargers). Furthermore, the Dischargers shall submit **Semi-Annual Monitoring Reports**, in accordance with the Discharge Monitoring Program (Attachment A), no later than January 31 and July 31 of each year; the January 31 semi-annual report may be combined with the annual report. The semi-annual report shall document any proposed maintenance activities for the upcoming monitoring period.

REPORT DUE DATES:
SEMI-ANNUAL AND ANNUAL REPORTS:
ANNUAL REPORT– January 31 (Each Year)
SEMI-ANNUAL REPORT – January 31 and July 31 (Each Year)

6. The Dischargers shall immediately notify the Board of any flooding, equipment failure, slope failure, or other change in site conditions that could impair the integrity of waste or leachate containment facilities or precipitation and drainage control structures.

REPORT DUE DATE:
Verbally Report Immediately (Written Report to follow within 5 Days)

7. The Dischargers shall prepare and submit a **Development Proposal**, acceptable to the Executive Officer, for any proposed additional development at the landfill.

COMPLIANCE DUE DATE:
120 days prior to commencement of construction

8. The Discharge Monitoring Program accompanying this Order (Attachment A) does not require the installation of any new wells. However, for any new wells required and installed as part of any future revised Discharge Monitoring Program, the Dischargers shall submit a **Well Installation Report**, acceptable to the Executive Officer, that provides all well construction details, geologic boring logs, and well development logs for these new wells.

COMPLIANCE DUE DATE:
45 days following completion of well installation activities

9. The Dischargers shall maintain a copy of these waste discharge requirements and these requirements shall be available to site personnel at the facility office at all times. (CWC Section 13263).

10. The Board considers the property owner(s) to have continuing responsibility for correcting any problems that arise in the future as a result of waste discharged or related activities.

11. The Dischargers shall permit the Regional Board or its authorized representative, upon presentation of credentials, during normal business hours:

    a. Immediate entry upon the premises on which wastes are located or in which any required records are kept;
    b. Access to copy any records required to be kept under the terms and conditions of this order;
    c. Inspection of any treatment equipment, monitoring equipment, or monitoring methods required by this order or by any other California State Agency; and,
    d. Sampling of any discharge or groundwater governed by this order.

12. The Dischargers shall notify the succeeding owners or operators of this Order by letter in the event of any change in control, ownership of land, or waste discharge facilities presently owned or controlled by the Dischargers. The Dischargers must notify the Executive Officer, in writing at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage to a new discharger. The notice must include a written agreement between the existing Dischargers and the new dischargers containing a specific date for the transfer of this order's responsibility and coverage between the current Dischargers and the new dischargers. This agreement shall include an acknowledgment that the existing Dischargers are liable for violations up to the transfer date and that the new

dischargers are liable from the transfer date on. (CWC Sections 13267 and 13263). The request must contain the requesting entity's full legal name, and the address and telephone number of the persons responsible for contact with the Board. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code.

13. This Order is subject to Board review and updating, as necessary, to comply with changing State and Federal laws, regulations, policies, or guidelines; changes in the Board's Basin Plan; or changes in the discharge characteristics (CWC Section 13263).

14. Where the Dischargers becomes aware that they failed to submit any relevant facts in a Report of Waste Discharge or submitted incorrect information in a Report of Waste Discharge or in any report to the Regional Board, it shall promptly submit such facts or information (CWC Sections 13260 and 13267).

15. This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, do not protect the Dischargers from liability under Federal, State or local laws, nor do they create a vested right for the Dischargers to continue waste discharge [CWC Section 13263(g)].

16. Provisions of these waste discharge requirements are severable. If any provision of these requirements is found invalid, the remainder of these requirements shall not be affected.

17. The Dischargers shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Dischargers to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this order [CWC Section 13263(f)].

18. Except for a discharge which is in compliance with these waste discharge requirements, any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) that person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the state toxic disaster contingency plan adopted pursuant to Article 3.7 (commencing with Section

8574.7) of Chapter 7 of Division 1 of Title 2 of the Government Code, and immediately notify the State Board or the appropriate Regional Board of the discharge. This provision does not require reporting of any discharge of less than a reportable quantity as provided for under subdivisions (f) and (g) of Section 13271 of the Water Code unless the Dischargers are in violation of a prohibition in the applicable Water Quality Control Plan [CWC Section 13271(a)].

19. The Dischargers shall report any noncompliance that may endanger health or the environment. Any such information shall be provided orally to the Executive officer within 24 hours from the time the Dischargers becomes aware of the circumstances. A written submission shall also be provided within five days of the time the Dischargers becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Executive Officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours [CWC Sections 13263 and 13267].

20. All monitoring instruments and devices used by the Dischargers to fulfill the prescribed Discharge Monitoring Program (Attachment A) shall be properly maintained and calibrated as necessary to ensure their continued accuracy.

21. Unless otherwise permitted by the Regional Board Executive officer, all analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. The Executive Officer may allow use of an uncertified laboratory under exceptional circumstances, such as when the closest laboratory to the monitoring location is outside the State boundaries and therefore not subject to certification. All analyses shall be required to be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants" (40 CFR, Part 1360) promulgated by the U.S. Environmental Protection Agency (CCR Title 23, Section 2230).

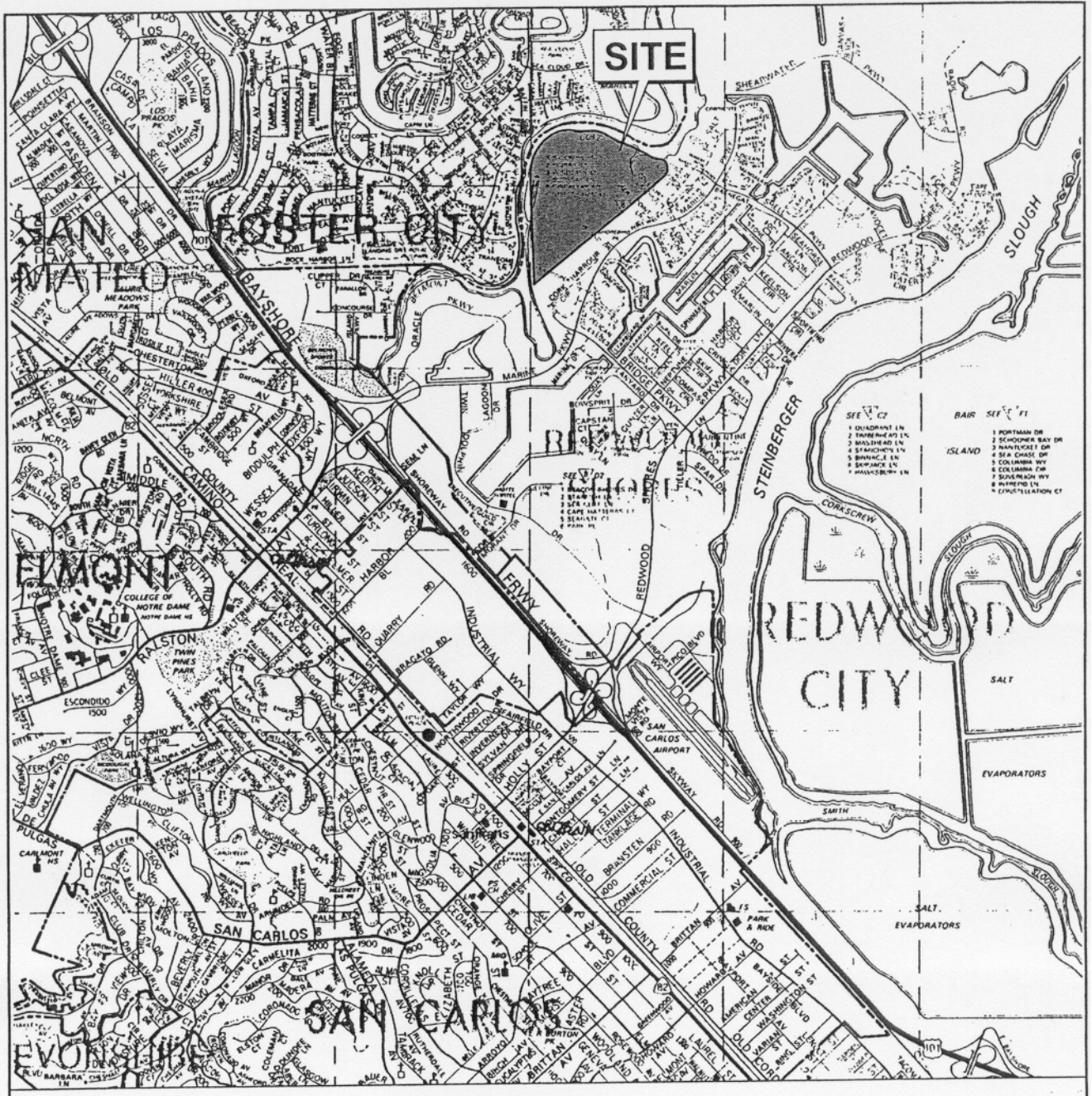
22. This Board's Order No. 94-181 is hereby rescinded.

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is a full, complete, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on August 20, 2003.

_____
Loretta K. Barsamian
Executive Officer

Figures: Figure 1 - Site Location Map
Figure 2 - Site Plan

Attachment: Attachment A - Discharge Monitoring Program



GEOMATRIX

SITE LOCATION MAP
Former Landfill-Westport Office Park
Redwood City, California

Project No.
2965.02M

Figure
1

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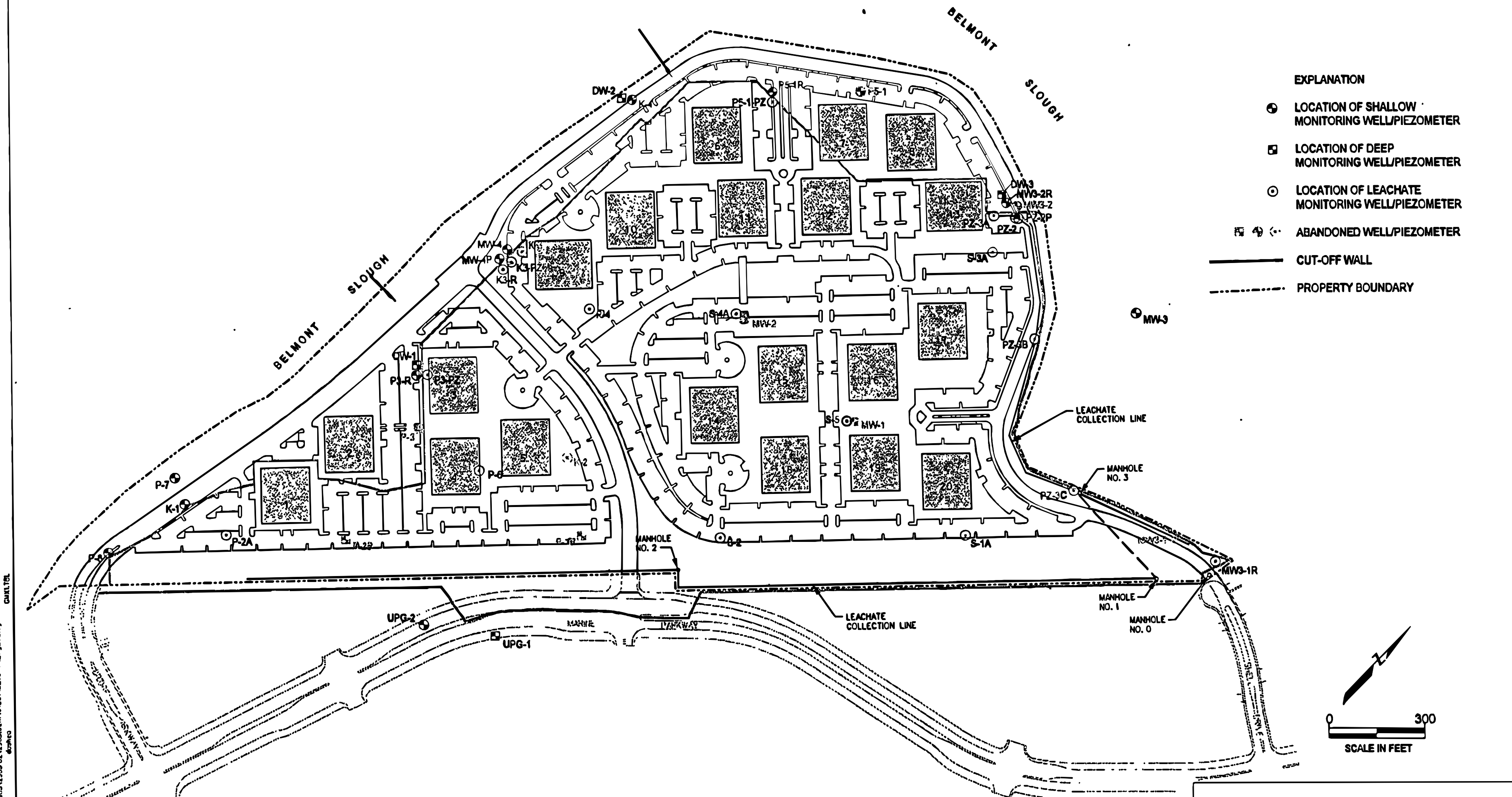

SITE PLAN
Former Landfill-Westport Office Park
Redwood City, California

GEOMATRIX	Project No. 2965.002 M	Figure 2

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

DISCHARGE MONITORING PROGRAM
FOR

WESTPORT LANDFILL
JOHN ARRILLAGA SURVIVOR'S TRUST, PEERY PRIVATE INVESTMENT COMPANY, AND THE PEERY PUBLIC INVESTMENT COMPANY

REDWOOD CITY, SAN MATEO COUNTY

ORDER NO. R2-2003-0074

CONSISTS OF

PART A

AND

PART B

PART A

A. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No.73-16. This Discharge Monitoring Program is issued in accordance with Provision C.3 of Regional Board Order No. R2-2003-0074

The principal purposes of a discharge-monitoring program are:

(1) to document compliance with waste discharge requirements and prohibitions established by the Board,
(2) to facilitate self-policing by the Dischargers in the prevention and abatement of pollution arising from waste discharge,
(3) to develop or assist in the development of standards of performance and toxicity standards, and
(4) to assist the Dischargers in complying with the requirements of Title 27.

B. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to the most recent version of EPA Standard Methods and in accordance with an approved sampling and analysis plan.

Water and waste analysis shall be performed by a laboratory approved for these analyses by the State of California. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Board.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. DEFINITION OF TERMS

1. A grab sample is a discrete sample collected at any time.

2. Receiving waters refers to any surface water, which actually or potentially receives surface or groundwater which passes over, through, or under waste materials or contaminated soils. In this case, the groundwater adjacent to the landfill areas and the surface runoff from the site are considered receiving waters.

3. Standard observations refer to:
    a. Receiving Waters:
        1) Floating and suspended materials of waste origin: presence or absence, source, and size of affected area;
        2) Discoloration and turbidity: description of color, source, and size of affected area;
        3) Evidence of odors, presence or absence, characterization, source, and distance of travel from source;
        4) Evidence of beneficial use: presence of water associated wildlife;
        5) Flow rate; and,
        6) Weather conditions: wind direction and estimated velocity, total precipitation during the previous five days and on the day of observation.

    b. Perimeter of the Waste Management Unit:
        1) Evidence of liquid leaving or entering the waste management unit, estimated size of affected area and flow rate. (Show affected area on map);
        2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source; and,
        3) Evidence of erosion and/or daylighted refuse.

    c. The Waste Management Unit:
        1) Evidence of ponded water at any point on the waste management facility;
        2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source;
        3) Evidence of erosion, slope movement, ground movement, and/or daylighted refuse; and,
        4) Standard Analysis (SA) and measurements are listed on Part B, 1., A., Table A (attached)

D. SAMPLING, ANALYSIS, AND OBSERVATIONS

The Dischargers are required to perform sampling, analyses, and observations in the following media:

1. Groundwater per Section 20415 and
2. Surface water per Section 20415 and per the general requirements specified in Section 20415 of Title 27 is not required. Due to the extensive Bay Mud flats surrounding the site and the hazards associated with traversing them, sampling this medium is not feasible. Shallow groundwater is considered receiving waters at this site.
3. Vadose zone per Section 2550.7(d) which is accomplished by sampling, analyzing, and recording the landfill gas concentrations at gas vent risers located at each building and at the east and southeast boundary of the site.

E. RECORDS TO BE MAINTAINED

Written reports shall be maintained by the Dischargers or laboratory, and shall be retained for a minimum of five years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Board. Such records shall show the following for each sample:

1. Identity of sample and sample station number;
2. Date and time of sampling;
3. Date and time that analyses are started and completed, and name of the personnel performing the analyses;
4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used;
5. Calculation of results; and,
6. Results of analyses, and detection limits for each analysis.

F. REPORTS TO BE FILED WITH THE BOARD

1. MONITORING REPORTS

Written discharge monitoring reports shall be filed by the 31st day of the month following the reporting period (the reporting period is specified in Part B of this program). In addition an annual report shall be filed as indicated in F.3 below. The reports shall comprise the following:

a. Letter of Transmittal

A letter transmitting the essential points in each report should accompany each report. Such a letter shall include a discussion of any requirement violations found during the last report period, and actions taken or planned for correcting the violations. If the Dischargers have previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred in the last report period this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

b. Each monitoring report shall include a compliance evaluation summary. The summary shall contain:

1) Concentration Limits for the Westport Landfill for all constituents of concern except ammonia, are "laboratory non-detect" based upon laboratory non-detect results for background concentrations of the listed COCs. As such, a non-statistical method is appropriate to determine whether a measurably significant release has occurred from the Westport Landfill. Therefore, any reported laboratory detection at a point of compliance monitoring well is considered a potential release. For ammonia, a statistically significant increase shall be evaluated using a statistical method acceptable to the Regional Board staff. Any potential release must be evaluated through additional monitoring and analyses acceptable to the Executive Officer.

2) A graphic description of the direction of groundwater flow under/around the waste management unit, based upon the water level elevations obtained during the monitoring period and pertinent visual observations.

3) The method and time of water level measurement, the type of pump used for purging, pump placement in the well; method of purging, pumping rate, equipment and methods used to monitor field pH, temperature, and conductivity during purging, calibration of the field equipment, results of pH, temperature, and conductivity testing, and the method of disposing of the purge water.

4) Type of pump used, pump placement for sampling, a detailed description of the sampling procedure; number and description of equipment, field and travel blanks; number and description of duplicate samples; type of sample containers and preservatives used, the date and time of sampling, the name and qualifications of the person actually taking the samples, and any other observations.

c. A map or aerial photograph shall accompany each report showing observation and monitoring station locations.

d. Laboratory statements of results of analyses specified in Part B, Table A must be included in each report. The director of the laboratory whose name appears on the laboratory certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Board.

1) The methods of analyses and detection limits must be appropriate for the expected concentrations. Specific methods of analyses must be identified. If methods other than EPA approved methods or Standard Methods are used, the exact methodology must be submitted for review and approved by the Executive Officer prior to use.

2) In addition to the results of the analyses, laboratory quality assurance/quality control (QA/QC) information must be included in the

monitoring report. The laboratory QA/QC information should include the method, equipment and analytical detection limits; the recovery rates; an explanation for any recovery rate that is less than 80% of the specific laboratory recovery limits; the results of equipment and method blanks; the results of spiked and surrogate samples; the frequency of quality control analysis; and the name and qualifications of the person(s) performing the analyses.

e. An evaluation of the effectiveness of the leachate monitoring or control facilities, which includes an evaluation of leachate buildup within the disposal units, a potentiometric surface map, a summary of leachate volumes removed from the units, and a discussion of the leachate disposal methods utilized.

f. A summary and certification of completion of all standard observations for the waste management unit, the perimeter of the waste management unit, and the receiving waters.

2. CONTINGENCY REPORTING

A report shall be made by telephone of any **seepage** from the disposal area immediately after it is discovered. A written report shall be filed with the Board within **five working days** thereafter. This report shall contain the following information:

1) A map showing the location(s) of discharge;
2) Approximate flow rate;
3) Nature of effects; i.e. all pertinent observations and analyses; and
4) Corrective measures underway, proposed, or as specified in the Waste Discharge Requirements.

3. REPORTING

By January 31 of each year the Dischargers shall submit an annual report to the Board covering the previous calendar year. This report shall contain:

a. Tabular summaries of the historical and recent monitoring data obtained during the previous year; the report should be accompanied by a compact disk (CD), MS-EXCEL format, tabulating the year's data.
b. A comprehensive discussion of the compliance record, and the corrective actions taken or planned which may be needed to bring the Dischargers into full compliance with the waste discharge requirements.

c. A written summary of the groundwater analyses indicating any change in the quality of the groundwater.
d. An evaluation of the effectiveness of the leachate monitoring/ control facilities, which includes an evaluation of leachate buildup within the disposal units, a summary of leachate volumes removed from the units, and a discussion of the leachate disposal methods utilized.

4. WELL LOGS

Although no new wells are required at the time of the adoption of this Order, if future conditions require the installation of additional monitoring wells, a boring log and a monitoring well construction log shall be submitted for each new sampling well established for this monitoring program, as well as a report of inspection or certification that each well has been constructed in accordance with the construction standards of the Department of Water Resources. These shall be submitted within 45 days after well installation.

PART B

1. DESCRIPTIONS OF OBSERVATION STATIONS AND SCHEDULE OF OBSERVATIONS.

A. GROUNDWATER AND LEACHATE MONITORING

Report Semi-annually

i. Groundwater: Groundwater samples shall be analyzed as outlined in Table A (Attached). Groundwater elevations shall be recorded quarterly and reported semi-annually in the July and January semi-annual monitoring reports.

Monitoring Points:

Groundwater	P-8, P-7, P3-R, MW-4, MW-4P, K-4, P5-1R, MW3-2R, MW-3, DW-1, DW-2, DW-3, UPG-1, UPG-2

MW-4 and MW-4P are in close proximity, therefore only one well needs to be monitored for the parameters listed in Table A. The other well (MW-4P) is intended as a piezometer well and shall be monitored for water elevation only. MW-4 is considered a POC well.

Wells UPG-1, UPG-2, and MW-3 shall be monitored for water elevation only.

ii. Leachate samples shall be analyzed once every five years (First leachate chemical analysis due for the January through July 2003 semi-annual monitoring event) for the parameters outlined in Table A (Attached). Leachate water elevations shall be recorded quarterly and reported semi-annually in the July and January semi-annual monitoring reports.

Monitoring Points:

Leachate-Impacted Groundwater	S-2, S-3A, S-4A, S-5, P-2A, P3-PZ, P-4, P5-1-PZ, P-6, K3-R, K3-PZ*, MW3-1R, PZ-2*, PZ-2P, PZ-3A*, PZ-3B*, PZ-3C

All wells shall be monitoring for water elevation. All wells shall be monitored for chemical constituents outlined in Table A (Attached) once every 5 Years. Wells denoted with an asterisk (*) shall be monitored for leachate elevations only.

B. FACILITIES MONITORING

The Dischargers shall inspect all facilities to ensure proper and safe operation once per quarter and report semi-annually.

MONITORING REPORT SCHEDULE

Reports shall be due on the following schedule:

First semi-annual report:	**July 31 of each year**
Second semi-annual Report:	**January 31 of each year**
Annual Report:	**Combined with the second semi-annual report, due January 31 of each year**

I, Loretta K. Barsamian, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in this Board's Order No. R2-2003-0074

2. Is effective on the date shown below.

3. May be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer.

_____

Loretta K. Barsamian
Executive Officer

Date Ordered: August 20, 2003

Attachment: Table A – Schedule for Sampling, Measurement, and Analysis

Table A - Discharge Monitoring Program, List of Analytical Parameters- Leachate and Groundwater

Field/Inorganic Parameters	Method[1]	Frequency
pH	Field	Semi-Annual
Electrical conductivity	Field	Semi-Annual
Groundwater Elevations	Field	Quarterly [2]
Leachate Elevations	Field	Quarterly [2]
Total Ammonia	350.3	Semi-Annual
Ammonia (un-ionized)	350.1	Semi-Annual

Organics/ PCBs	Method[1]	Frequency
Volatile Organic Compounds (including MTBE)	8260	Semi-Annual [3,4]
Semi-Volatile Organic Compounds	8270	Semi-Annual [3,4]
PCBs	8082	Semi-Annual [3,4]

Notes:

1. Test methods per Methods for Chemical Analysis of Water and Waste, USEPA 600/4/79/029, revised March 1983, or Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods, USEPA SW-846, 3rd edition, November 1986 and revisions. Board staff may consider alternative EPA and/or Standard Methods, with comparable MDLs and PQLs, for use at the Westport Landfill.

2. Analyzed quarterly and reported semi-annually.

3. Analysis of groundwater (wells located outside the waste management unit) shall be conducted during the 2003 calendar year. Any identified impacted groundwater monitoring wells shall be analyzed semi-annually thereafter. All other groundwater-monitoring wells shall be sampled annually, thereafter.

4. Analysis of existing leachate-impacted groundwater wells within the WMU shall be conducted during the 2003 calendar year and once every 5 years, thereafter.